

GAVASHELI, Sh.G.

Soil temperature regimen in Tiflis. Trudy Inst.geofiz.AN Gruz.  
SSR 17:405-443 '58. (MIRA 1):4)  
(Tiflis--Soil temperature)



GAVASHELI, Sh. G., Cand Phys-Math Sci -- (diss) "Temperature conditions of soil in Tbilisi." Tbilisi, Tbilisi Univ Publishing House, 1960. 16 pp with graphs; (Tbilisi State Univ im Stalin); 150 copies; free; (KL, 23-60, 121)

GAVASHELI, Sh.G.

Soil temperature conditions in Tiflis. Sbor. rab. Tbil.  
gidromet. obser. no.1:3-36 '60. (MIRA 14:8)  
(Tiflis—Soil temperature)

CAVAT, Iulian

Trends of the seismotectonic research in Rumania during  
the last 20 years. Studii astron seismol 6 no.2:293-296  
'61.

1. Membru corespondent al Academiei R. P. R.

1ST AND 2ND CROSSL										3RD AND 4TH CROSSL									
PROCESSES AND PROPERTIES INDEX																			
<p>10</p> <p>Canizzaro reaction. C. D. Nenitzescu and I. Gavát. <i>Rev. Roum. Chim.</i> 10, A, 42 (1934). The velocity of the Canizzaro reaction with <math>\text{BzH}</math> in 80% <math>\text{MeOH}</math> at <math>20^\circ</math> is greatly increased by increase in the concn. of <math>\text{KOH}</math> from 0.5 <math>N</math> to 4.0 <math>N</math> and slightly (catalytically) by <math>\text{Cu}</math> at <math>50^\circ</math>. <math>\text{NaMeEtOH}</math> effects the reaction, but <math>\text{Na}_2\text{CO}_3</math> and <math>\text{NaHPO}_4</math> do not. Equimol. mixts. of <math>\text{BzH}</math> with <math>\text{CH}_3\text{O}</math> or <math>\text{MeOC}_6\text{H}_4\text{CHO}</math> give both pairs of acids and alcs. A large excess of <math>\text{CH}_3\text{O}</math> gives almost exclusively <math>\text{HCO}_2\text{H}</math> and the aromatic alc. (<math>\text{PhCH}_2\text{OH}</math>, <math>\text{MeOC}_6\text{H}_4\text{CH}_2\text{OH}</math>, or <math>m\text{-O}_2\text{NC}_6\text{H}_4\text{CH}_2\text{OH}</math>). B. C. A.</p>																			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			

SA

AS3

535.343.2

535. Absorption and fluorescence spectra of the  
methyl-naphthalenes. GAVAT, I., IRIMESCU, I.,  
TITEICA, R. AND VENCOV, ST. *Bull. Soc. Roumaine  
Phys.*, 42 (No. 78) 63-71 (1941) In French.

ASG-35.4 METALLURGICAL LITERATURE CLASSIFICATION

CAVAT, I.

RUMANIA/Chemical Technology - Chemical Products and Their  
Application, Part 4. - Varnishes, Paints, Paint  
Coatings.

H-30

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 48820

Author : I. Gavtat, P. Soviani

Inst : -

Title : Modified Phenolaldehyde Plastics.

Orig Pub : Rev. chim., 1957, 8, No 4, 264-270

Abstract : The preparation of light colored oil-soluble resins of the albertal type with an elevated softening temperature (160 to 172°) is described. These resins are prepared by the interaction of colophony and maleic anhydride with preliminarily prepared tetramethyloldephenylolpropane or resol resins (condensation products of phenol, cresol, or n-tert.-butylphenol with formaldehyde) at 150° and following esterification with glycerin (at 250 to 260°). These resins are soluble in siccative and

Card 1/2

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RUMANIA / Chemical Technology. Chemical Products and H-29  
Their Application. Plastics.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 2971.

Author : Gavat, I.

Inst : ~~Not given.~~

Title : New Trends in Polymer Synthesis.

Orig Pub: Tehn noua, 1958, 5, No 151, 8.

Abstract: A brief review on current methods in the synthesis of polyethylene and polypropylene having a stereoregular structure, on SK Synthetic Rubber from isoprene, application of irradiation for the polymerization of monomers, and the preparation of block and grafted polymers. -- L. Pesin.

Card 1/1

SAVAT, I.

Synthetic adhesives for the plywood industry. p. 97.

INDUSTRIA LEMNULUI. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Industrii Lemnului. Bucuresti, Romania. Vol. 8, no. 3, Mar. 1959.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, no. 7, July 1959

Uncl.

GAVAT, I.; VEINICERIU, A.

Determining the total organic chlorine in agricultural pesticides with the aid of sodium amide. p. 582

REVISTA DE CHIMIE. (Ministerul Industriei Petrolului si Chimiei si Asociatia Stiintifica A Inginerilor si Tehnicienilor din Romania)  
Bucuresti, Rumania, Vol. 10, no. 10, Oct. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, August 1959  
UNCL

GAVAT, I., dr.; CIOLAN, I., ing.

Method for a continuous production of sebacic acid and octyl alcohol  
from castor oil. Rev chimie Min petr 12 no.12:708-709 D '61.

(Sebacic acid) (Octyl alcohol) (Castor oil)

S/169/62/000/009/010/120  
D228/D307

AUTHOR: Gavăt, Iulian

TITLE: Seismotectonic research trends over the past 20 years  
in the Rumanian People's Republic

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 19-20,  
abstract 9A126 (Studii și cercetări astron. și seis-  
mol., 6, no. 2, 1961, 293-296 (Rum.; summaries in  
Russ. and Fr.))

TEXT: A macroseismic examination of the earthquake of November 10, 1940, was started at the former Geologic Institute of Rumania. Professor Ion. S. Atanasiu and Geologist T. Kraitner published the first results in a work, printed in 1941. At the same time, Ion S. Atanasiu published the results of macroseismic premises for the 1940 earthquake, supplementing the work with a map of isoseismals and seismic culmination lines for Rumanian territory. In 1949, the Academy of Sciences of the RPR issued Ion Atanasiu's third work on the question of the seismic sensitivity of the RPR's territory ✓

Card 1/2

Seismotectonic research trends ...

S/169/62/000/009/010/120  
D228/D307

according to data for both the 1940 earthquake and previous seismic phenomena. The characteristic features of the seismicity of the RPR's territory and the initial seismotectonic deductions are exposed in this work. In a more extensive treatise that has yet to be published the same author interprets earthquakes in the RPR macroseismically. This work is to be specially presented at an impending conference, as is a 1:1,500,000 scale seismotectonic map of the RPR, compiled by the same author. In these works it is possible to trace new trends and tendencies in the investigation of objective macroseismic data relating to seismotectonics. The subsequent results of geophysical deep drilling investigations have confirmed some of Ion Atanasiu's seismotectonic deductions. The author studies the seismic interdependence of large tectonic units on the RPR's territory by means of the differential and integral analysis of a number of Rumanian earthquakes. The seismotectonic maps appended to the works promote the macroseismic zoning of the RPR's territory and earthquake-proof building. [Abstracter's note: Complete translation.] ✓

Card 2/2

GAVAT, I.; BUCUR, Evghenia; DINULESCU, Nicara; ANTONESCU, P.

Some anticorrosive protections obtained from sulfochlorinated polyethylene. Rev chimie Min petr 15 no.2:101-106 F '64.

ISACESCU, Dimitrie A.; GAVAT, Ion; STOICESCU, Calin; VASS, Cecilia; PETRUS,  
Ileana

Studies on furfural. Pt.26. Rev chimie Roum 10 no.3:219-231  
Mr '65.

1. Institute of Physical Chemistry, Rumanian Academy, Bucharest.  
Submitted June 23, 1964.



ISACESCU, Dimitrie A.; GAVAT, Ion; STOICENCO, Calin; TONESCU, Ion V.

Studies on furfural. Pt.27. Rev chimie Roum 10 no.3;233-244 Mr '65.

1. Institute of Physical Chemistry, Rumanian Academy, Bucharest.  
Submitted June 23, 1964.

ISACESCU, Dimitrie A.; GAVAT, I.; URSU, Victoria

Studies on furfural. Pt.29. Rev chimie Roum 10 no.3:257-267 Mr '65.

1. Institute of Physical Chemistry, Rumanian Academy, Bucharest.  
Submitted July 28, 1964.

ISACESCU, Dimitrie A.; GAVAT, Ion; STOICESCU, Calin; VASS, Cecilia; PETRUS, Ileana

Studies in the furfural field. Pt.26. Studii cerc chim 14  
no.3:197-209 Mr '65.

1. Physical Chemistry Research Center, Rumanian Academy,  
18 Dumbrava Rosie St., Bucharest. Submitted June 23, 1964.

ISACESCU, Dimitrie A.; GAVAT, Ion; IONESCU, Ion V.; STOICESCU, Calin

Studies in the furfural field. Pt.27. Studii cerc chim 14  
no.3:211-220 Mr '65.

1. Physical Chemistry Research Center, Rumanian Academy,  
13 Dumbrava Rosie St., Bucharest. Submitted June 23, 1964.

ISACESCU, Dimitrie A.; GAVAT, Ion; URSU, Victoria

Studies in the furfural field. Pt.29. Studii cerc chim 14  
no.3:233-243 Mr '65.

1. Physical Chemistry Research Center, Rumanian Academy,  
18 Dumbrava Rosie St., Bucharest. Submitted July 28, 1964.

AMBRUS, T.; TINCU, L.; VELNICERIU, A.; GAVAT, Lucia

Contributions to the synthesis of the Captan fungicide. Note II.  
Rev chimie Min petr 13 no.5:275-278 My '62.

VELNIGERIU, A.; GAVAT, Lucia; TINCUI, Lucia

On the stability of some substituted s-triazines, used as herbicides.  
Rev. chimie Min petr 13 no.9:513-516 S '62.

GRAT. L. 10

SECRET continued

RUMANIA

Consult

Institute of Public Health and Hygiene of the RPR, IECHEM,  
and the Institute of Biology of the Academy of the RPR (Institute  
of Hygiene and Sanitary Public Health, IECHEM, and the Institute of  
Biological Academician RPR).

Document, Igiene, Revista de Igiene si Sanitate Publica, 1962,  
Vol III, Sep-Oct 62, pp 377-380.

"Problems of Food Hygiene Raised by the Use of Chemical Substances  
in Agriculture."

BAMIR, Gabriela, Engr, Institute of Public Health and Hygiene of the  
RPR, IECHEM, and the Institute of Biology of the Academy of the  
RPR.

~~(2-01-2)~~



CA

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Ring analysis of an Edlecanu (liquid SO<sub>2</sub>) extract of a lubricating oil from Balcoi. Valeriu Vantu and Maria Gaxa. *Ind. Nat. Cercetari Tehnol.* 3, 212-21 (1978). The cyclic hydrogenation content was detd. on 3 fractions of a liquid SO<sub>2</sub> ext. of a lubricating oil according to the method of Vlughter, Waterman, and van Westen (C.I. 26, 4702, 8107; 29, 7057). The starting material was an Edlecanu ext. of a Balcoi crude oil which was steam-distd. at 180-200° at 20 mm. A first fractionation yielded an oil [I] having  $\eta_{sp}$  of 1003 centistokes and  $\eta_{sp}/c$  70 centistokes. On redistn. two fractions [II] and [III] were sepd. II had  $d_4^{20}$  0.943, flash point 185°, f.p. 0°,  $\eta_{sp}$  101.6 centistokes,  $\eta_{sp}/c$  38.1 centistokes, viscosity index (Dean-Davis) 1. III was characterized by  $d_4^{20}$  0.940, flash point 205°, f.p. 10°,  $\eta_{sp}$  1800 centistokes, viscosity index (Dean-Davis) 212. Sp. viscosity, mol. wt., aniline point, and C and H were detd. for the 3 fractions. By use of the curves developed by Vlughter, *et al.* (*loc. cit.*) the percentages of paraffinic, aromatic, and naphthenic hydrocarbons were estd. For I 47.3%, aromatic, 20.70% aliphatic, and 20.1%; naphthenic hydrocarbons were estd.

For II the corresponding values were 33.4%, 11.4%, and 45.2%. While for III 40.3%, 20.3%, and 33.4%, resp., were calcd. Eight successive hydrogenations at 300, 520 atm and 180° in the presence of Ni and of Raney Ni, in the last 3, changed the aniline point from 20° to 82.5°. The H<sub>2</sub> content increased 3.11%, corresponding to an initial aromatic content of 39.4%, instead of the 47% calcd. from the ring analysis. Further hydrogenation to aniline point 84° would have been necessary to obtain this value. The increasing difficulty of hydrogenating the product without cracking prevented this. The SO<sub>2</sub> extn. method apparently dissolved a large proportion of nonaromatic hydrocarbons as well as aromatic hydrocarbons. C. Wohlberg

GAVAT, M.; HUGH, C.

Polyethylene, polypropylene, and copolymers. p. 408.

REVISTA DE CHIMIE. (Ministerul Industriei Petrolului si Chimiei si  
Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania) Bucuresti.  
Romania. Vol. 10, no. 7, July 1959.

Monthly List of East European Accessions (MEA) LC, Vol. 9, no. 1,  
January 1960.

Uncl.

NENITSESKU, K.D. [Nenicescu, K.].; GLATTS, A.M.; GAVET, M.; POGANI, Yu.

Syntheses of  $\alpha$ -substituted  $\beta$ -keto esters. Izv. AN SSSR. Otd.  
khim. nauk no. 2: 332-339 F '63. (MIRA 16:4)

1. Khimicheskiy institut Akademii Rumynskoy Narodnoy Respubliki,  
Bukhrest.

(Esters)

(Carbonyl group)

BALABAN, A. T.; GAVAT, Maria; FRANGOPOL, P. T.; MOCANU, Maria; NENITZESCU, C. D.  
[Nenitescu, C. D.]

Pyrylium salts obtained by diacylation of olefins. Pt. 13.  
Rev chimie Roum 9 no.1:79-92 Ja '64

1. Institute for Atomic Physics (P.O.Box 35) and Institute of  
Organic Chemistry of the Rumanian Academy, Bucharest.

BALABAN, A. T.; GAVAT, Maria; FRANGOPOL, P. T.; MOCANU, Maria  
HENITESCU, C. D.

Pyrrilium salts obtained by olefin diacylation. Pt. 12.  
Studii cerc chim 12 no. 1: 71-85 Ja '64.

1. Institute of Atomic Physics and the Center of Organic  
Chemistry of the Rumanian Academy, Bucharest.

L 29661-66 EWP(k)/EWP(h)/EWP(l)/EWP(v) EC

ACC NRI AP020132

SOURCE CODE: RU/0011/65/009/005/0221/0228

AUTHOR: Weinrich, G. (Engineer; Candidate of technical sciences); Landau, I. D. (Engineer); Mihailescu, I. (Engineer); Constantinescu, M. (Engineer); Gavat, St. (Engineer) 64  
R

ORG: none

TITLE: Unified transistorized regulating system for rapid dynamic processes--UNIDIN

SOURCE: Automatica si electronica, v. 9, no. 5, 1965, 221-228

TOPIC TAGS: automatic regulation, transistorized circuit

ABSTRACT: The authors summarize the design and operation of the UNIDIN transistorized automatic regulation system, built in Rumania since 1963-1964, and review the results of its use in various applications. They conclude that the principles underlying the design have proved to be the correct ones, and that its modular construction with standardized elements (printed circuit cards, etc.) offers many advantages from the point of view of construction, installation and operation. Orig. art. has: 5 figures and 1 table. [JPRS]

SUB CODE: 13, 09 / SUM DATE: none / ORIG REF: 004

Card 1/1 116

UDC: 621-523.8

NICOLAU, Edm.; WEBER, I.; GAVAT, St.

Apparatus for automatic recognition of the vowels. Automatica  
electronica 7 no.6:255-261 N-D'63.

NICULESCU, St.; ONICESCU, D.; GAVAT, V.; SIMIONESCU, V.

Contributions to the study of regeneration in the peripheral nerves.  
Changes in the nervous structures in the vicinity of certain animal  
parasites localized in the muscles. Rumanian M Rev. no.3:3-7 J1-S  
'60.

(MUSCLES pathol) (TRICHINOSIS pathol) (PERIPHERAL NERVES pathology)



GAVAT, U.

HUMANA / Human and Animal Morphology, Normal and Pathological. 5  
 Nervous System  
 The Jour : Bul Ch Biol., No 21, 1958, No 97061  
 Authors : Niculescu, Ion. T.; Nici-Purubel, M.; ~~Brachianu, M.~~  
 Cosoveanu-Yolnescu, S.; Gyrescu, I.; Boelmas, C.; Pott, L.;  
 Putroscu, C.; Gavit, V.  
 Inst : Romanian Academy  
 Title : On Nerve Endings in the Prostate  
 Orig Pub : Comun. Acad. RPR, 1957, 7, No. 1, 131-134.  
 Abstract : In the prostate gland of the guinea pig, cat, dog and mouse,  
 rich innervation of the gland itself, as well as its effer-  
 ent duct, was discovered. In smooth musculature, by the  
 method of impregnation, the prevalence of encapsulated sen-  
 sory bodies described by Timofeev was detected.

Card 1/1

NICOLESKO, St.; ONICESKO, Doina; GAVAT, Victoria; SIMIONESKO, Vasilica

Apropos of the significance of some neurological lesions caused by animal parasites localized in the muscle. Acta Morph. Acad. Sci. Hung. 11 no.2:257-266 '62.

1. Laboratoire d'Histologie de l'Institut de Medecine et de Pharmacie de Bucarest.

(TRICHINOSIS pathol) (NERVOUS SYSTEM pathol)

GAVAY, Eva, dr.; VARGA, Lajos, dr.

Phlegmasia coerulea dolens. Orv. hetil. 105-no.10:464-466  
10 Mr'64.

1. Csornai Jarasi Tanacs Korhaza, Belgyogyaszat.

\*

1. GAVAY, V. S. .
- 2 USSR 600
4. Pine
7. Root system of pine from natural origins and in plantings, Les. khoz, 5, No. 12, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

*Gavazov, Khr.*

ZARACHOLEV, Il.

*Deleted (in copy); Given Name*

Country: Bulgaria

Analysis Degree: not indicated

Affiliation: not indicated

Source: Sofia, *Khizhion*, No 1, Jan/Feb 61, pp 49-52

Data: "Epidemics of Acute Nephritis."

Co-authors:

GEORG, Iv.

APOSTOLOV, O.

YANKOV, K.

STOYANOV, A.

GAVAZOV, Khr.

VASILY, Khr.

GAVAZOVA, T.A.

New designs of hollow glass blocks. Stek.1 ker. 17 no.4:  
17-21 Ap '60. (MIRA 13:8)  
(Glass construction)

GAVAZZI, M.

Josef Hursky's Vylidnovani a asimilace slovanskyh obci v Gradisti  
(Depopulation and Assimilation of Slavic Communities in Burgenland);  
a book review. p. 300.  
(Slovenski Etnograf. Vol. 9, 1956, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) LS, Vol. 6, no. 7, July 1957, "ncl.

L 40202-66 Ewf(1)/EWT(m)/EEC(k)-2/T/EWF(t)/ETI IJP(c) JD

ACC NR: AP6030043

SOURCE CODE: UR/0292/66/000/006/0004/0008

AUTHOR: Veytsman, L. Yu. (Engineer); Gavchuk, A. N. (Engineer); Sergeyev, A. V. 50  
(Engineer); Uzars, V. Ya. (Engineer) B

ORG: none

TITLE: Investigation of load characteristics of silicon power diodes 21

SOURCE: Elektrotehnika, no. 6, 1966, 4-8 25

TOPIC TAGS: silicon diode, electronic rectifier/VK-200 silicon diode, PVK-200 silicon diode

ABSTRACT: Data are presented from an investigation of the overload characteristics of silicon power diodes VK-200, VKD-200 and PVK-200, and their parameters are compared. Practical recommendations are given for reduction of the number of semiconductor diodes in rectifiers of electric trains. In the diodes tested, increasing short circuit current caused a non-linear increase in p-n junction temperature depending on the preliminary heating of the junction. The body temperatures of the three types of diodes tested under the same operating conditions differed very little. The internal thermal resistance of the PVK-200 was found to be about 1.5 times that of the other two types. It was decided that protection of the rectifier of the ER-9 electric locomotive could be simplified, since the requirements for overload capacity of silicon diodes is satisfied in conjunction with a high-voltage air-gap circuit breaker plus current-limiting reactor. Orig. art. has: 5 figures and 5 tables. [JPRS: 37,061]

SUB CODE: 09 / SUBM DATE: none

Card 1/1 20

UDC: 621.646.001.1

04/8 0637



*CAVEL*

POLAND / Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour: Ref Zhur-Khimiya, No 16, 1958, 53285.

Author : Cavel

Inst : Not given.

Title : Nephrite from Jordancv in Lower Silesia.

Orig Pub: Przegl. geol., 1957, 5, No 7, 299-303.

Abstract: A nephrite deposit is described which was formed in a transformation process of the most ancient rocks-dunites and pyroxemites. The dunites conversion into serpentinites is explained by the penetration of a gabbroic magma by water vapors. With the various differentiates of the latter are connected vein formations of saccharite, nephrite, oligoclasite, quartz-zoesite and others.

Card 1/3

POLAND / Cosmochemistry. Geochemistry. Hydrochemistry.

D

Abs Jour: Ref Zhur-Khimiya, No 16, 1958, 53285.

Abstract: On the basis of the available data a conclusion was drawn that a noted serpentine transition into talc cannot be the result of an intruding magma effect. Its formation is connected with the dynamic processes taking place by the displacement of rocks. A nephrite is timed with the talc rock contact and zeosite-quartz veins. It is assumed, that its formation is connected with the addition of CaO to a talc molecule, which might be quite possible since zeosite rocks contain a large amount of CaO. A Mixed-fibrous structure of nephrite indicates the influence of tectonic movements at the time of its formation. Great importance in the process of deposit formation is attributed to hydrothermal factors (formation of opal, chiolite and others). A chemical analysis

Card 2/3

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POLAND / Cosmochemistry. Geochemistry. Hydrochemistry.

D

Abs Jour: Ref Zhur-Khimiya, No 16, 1958, 53285.

Abstract: of talc is cited (in %):  $\text{SiO}_2$  - 60.68,  $\text{Al}_2\text{O}_3$  0.40,  $\text{Fe}_2\text{O}_3$  2.04,  $\text{FeO}$  4.12,  $\text{MnO}$  trace,  $\text{MgO}$  27.40,  $\text{CaO}$  1.76,  $\text{Na}_2\text{O}$  0.21,  $\text{K}_2\text{O}$  0.07,  $\text{H}_2\text{O}$  0.48,  $\text{H}_2\text{O}^+$  3.14 total 100.324. Two analyses of talc and zeosite rocks are cited as well.

Card 3/3



GEL'FAND, I.M. (Moskva); DYUDENI, N.Ye. (SShA); KIRILLOV, A.A. (Moskva);  
PODSYPANIN, V. (Tula); TER-MKRTACHAN, M. (Yerevan); KUZ'MIN, Yu.I.  
(Moskva); VEYL', G. (SShA); FADDEYEV, D.K. (Leningrad); ARNOL'D,  
V.I. (Moskva); IVANOV, V.F. (San-Karlos, Kaliforniya, SShA);  
GRAYEV, M.I. (Moskva); LEBEDEV, N.A. (Leningrad); LOPSHITS, A.M.  
(Moskva); ZHITOMIRSKIY, Ya.I.; MITYAGIN, B.S. (Moskva); SKOPETS,  
Z.A. (Yaroslavl'); PUANKARE, A. (Frantsiya); GAVEL, V.V. (Brno,  
Chekhoslovariya); SOLOMYAK, M.Z. (Leningrad); LEVIN, V.I. (Moskva);  
BARBAN, M.B. (Tashkent); FRIDMAN, L.M. (Tula)

Problems. Mat. prov. no.5:253-260 '60.

(MIRA 13:12)

(Mathematics--Problems, exercises, etc.)

ACC NR: AP6034042

SOURCE CODE: UR/0103/66/000/010/0033/0042

AUTHOR: Gavel, Ya. (Prague); Kochetkov, Ye. S. (Moscow)

ORG: none

TITLE: Calculation and simulation of one class of fault-detection repairable systems

SOURCE: Avtomatika i telemekhanika, no. 10, 1966, 33-42

TOPIC TAGS: system reliability, repairable system

ABSTRACT: A system intended for receiving (recording) some arriving messages is considered. The operable condition of the system is monitored by issuing periodic checking signals. The messages form a stationary Poisson flow. The monitoring system itself may be either perfect or liable to failures. The mathematical expectation of message loss and the mean time to first failure are calculated (general formulas derived) for both variants of the monitoring system. Both cases were also simulated at the Prague Institute of Theory of Information and Automation, ChSAN; the simulation verified the formulas. The simulator is represented by its block diagram only. Orig. art. has: 2 figures, 34 formulas, and 6 tables.

SUB CODE: 14 / SUBM DATE: 29Jan66 / ORIG REF: 003 / OTH REF: 001

Card 1/1

UDC: [62-50].019.3.001.24

S/271/63/000/003/035/049  
A060/A126

AUTHOR: Gavel, Yan

TITLE: Generator of random processes and the potentialities of its application

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 3, 1963, 31, abstract 3B191 (Kovoexport (CSSR), 1962, no. 6, 8 - 12)

TEXT: The author describes a generator of random signals producing a sequence of pulses of two types ("0" and "1") at arbitrarily fixed intervals, where the probability of occurrence of each type of pulse constitutes 0.5, and it is independent of the preceding pulses. The generator consists of a source of initiating pulses with random time-distribution, of a converter unit, of shaping and regulating units. The generator is produced in the form of separate units, mounted in a common cabinet, equipped with a ventilator for cooling under long-term operation. The pulse repetition frequency is set by an external generator with frequency not exceeding 5 kc and with a signal of arbitrary shape.

Card 1/2

Generator of random processes and the ....

S/271/63/000/003/035/049  
A060/A126

The possibility of using the generator of random signals for calculations using a simulation computer is ensured by the fact that the generator is equipped with a special output transforming the random process to a characteristic of the type of a random telephone signal symmetric with respect to zero and with an amplitude of  $\pm 75$  v. The generator permits the creation in combination with a computer of various stochastic processes with both continuous and discrete time, for example, of Gaussian processes with specified correlation functions. With the aid of the generator it is possible to determine the optimal characteristics of regulators, the minimum number of connections for a telephone station, to solve problems of the theory of games, to determine pulse characteristics of linear systems, etc. There are 6 figures and 10 references.

V.L.

[Abstracter's note: Complete translation]

Card 2/2

L 44136-66 ENT(1)/ENT(m) RO

ACC NR: AP6022402 (A) SOURCE CODE: UR/0317/66/000/002/0030/0031

AUTHOR: Gavelda, S. (Lieutenant colonel; Engineer); Bazior, Yu. (Engineer; Major)

ORG: none

TITLE: Simulators of contamination

SOURCE: Tekhnika i vooruzheniye, no. 2, 1966, 30-31

TOPIC TAGS: radiation simulation, radioactive contamination, CW detector equip-  
ment, x-ray meter, radiation simulator / IP-3 radiation simulator, IP-08 radiation  
simulator, DP-3 x-ray meter, D-08 x-ray meter  
ABSTRACT: A description is given of simulators of radiation and chemical detection  
devices for the armed forces, which make it possible to avoid the use of radioactive  
and toxic substances. The IP-3<sup>28</sup> radiation simulator is in a 140 x 170 x 90-mm box  
and controls the readings of a DP-3 x-ray meter. Simulator operation is based on  
the principle of a self-exciting multivibrator using an ESS-82 double-triode. The  
latter has a current feedback in the cathode circuit and a voltage current in the plate  
circuit of the first triode and in the control grid of the second. From the plate of the

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L 44136-66

ACC NR: AP6022402

second triode, the pulses are transmitted along a coupling cable to the pulse-shaping circuit of the x-ray meter. At the circuit output the simulator sums the pulses and transmits them to a microammeter whose scale is calibrated in proportion to the number of pulses, and, consequently, to the dose rate which varies from 0.2—150 r/hr. The IP-08<sup>76</sup> radiation simulator is designed to simulate radioactive contamination. It is used in training for radiation-detection operations and in the use of the D-08<sup>76</sup> x-ray meter. The principle of operation of the IP-08 is based on simulation of the ionization-chamber current transmitted along the control grid resistors of a d-c amplifier. Variations in voltage caused by the amplifier result in a proportional variation of the voltage in the ionization chamber and, consequently, in a simulation of the dose rate. The ionization-chamber current performs simulation by means of a voltage divider whose circuit is connected with the x-ray meter resistors with a resistibility ten times higher than that of the corresponding resistors of the simulator. The simulator is assembled in a 85 x 125 x 55-mm box and measures power rates from 0—300 r/hr. The IS-GSP<sup>76</sup> contamination simulator<sup>76</sup> is designed to control the light and sound signaling of the GSP-1 gas alarm. The simulator, which is in a

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L 44136-66 EWT(1)/TWT(n) RO

ACC NR: AP6022402

85 x 125 x 55-mm box, contains three separate circuits: a circuit for changing the operating cycle of the suction system, a circuit indicating radioactive contamination, and a circuit indicating toxin contamination. Orig. art. has: 2 figures. [DW]

SUB CODE: 15, 09/8/SUBM DATE: none/

LC  
Card 3/3

GAVELOIK, J.

"Planning the Maintenance of Machinery in the Pulp and Paper Industry." p. 3, Praha,  
Vol. 9, no. 1/2, Jan./Feb. 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

GAVELICH, G. A.

USSR/Mines

Mar 1948

Mining Machinery

Mining Methods

"Mining with Open Hoppers in the Temir-Tau Mine and the Bol'shaya Gora Open-Cut Mine," G. A. Gavelich, Ye. M. Il'inskiy, Mining Engineers, 2½ pp

"Gornyy Zhur" No 3

Describes in detail the accumulative extraction method of mining used in the Temir-Tau magnetite mine and the Bol'shaya Gora open-cut dolomite mine, and explain the open-hopper systems with aid of diagrams.

LC

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L 33604-65 EPA(e)-2/ENT(m)/EPF(e)/EPF(n)-2/ENC(m)/ENP(j)/ENP(+)/ENP(b) ENH/mf

ACCESSION NR: AP5009491

Z/0038/65/000/001/0003/0008

AUTHOR: Havelka, S. (Cavelka, S.), Kyrš, M. (Kyrsh, M.)

TITLE: Laboratory investigation of nuclear fuel reprocessing in Czechoslovakia

SOURCE: Jaderna energie, no. 1, 1965, 3-8

TOPIC TAGS: nuclear fuel, fuel refining

ABSTRACT: Several separation methods convenient for spent fuel reprocessing were studied. Extractions with organic extractants (especially organophosphates), sorption on ion exchangers having phosphorus in the functional group, sorption and coprecipitation of a number of inorganic materials, and forming of radiocolloids were investigated. Investigations of separations by fluoride distillation methods were begun. The problems were studied in a laboratory scale at low activity level. Original article has: 3 formulas, 1 table

ASSOCIATION: Ustav jaderného výzkumu CSAV, Rez (Institute for Nuclear Research, CSAV)

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NO REF SOV: 002

OTHER: 028

NA

Card 1/1

CAVELKA, YU  
USSR/Electronics - Production

Card 1/1

Authors : Stronsky, I., Correspondent-Member of the Academy of Sciences of Czechoslovakia, and Eng. Gavelka, Yu.

Title : Radio Industry in the Republic of Czechoslovakia

Periodical : Radio. 5, 20 - 21, May 1954

Abstract : The article deals, in a general way, with the progress of the Czechoslovakian radio industry, in the field of production of radio receivers, television sets and parts, during the last post-war years, particularly since 1950. The authors endeavor to show the impact of the USSR radio industry on the development of certain branches of radio-engineering in Czechoslovakia.

Institution : ....

Submitted : ....

ACC NR: AT6028386

(N)

SOURCE CODE: UR/0000/65/000/000/0243/0256

AUTHOR: Anashin, Yu. F.; Gavelya, A. P.; Kirillov, V. N.; Tychkova, M. V.

ORG: none

TITLE: Geophysical investigations in searching for water in desert and semidesert areas of Kazakhstan

SOURCE: International Geological Congress. 22d, New Delhi, 1964. Geologicheskkiye rezul'taty prikladnoy geofiziki (Geological results of applied geophysics); doklady sovetskikh geologov, problema 2. Moscow, Izd-vo Nedra, 1965, 243-256

TOPIC TAGS: prospecting, geophysic expedition, underground water, geophysic prospecting, ~~geophysical prospecting~~, tellurometry, water, desert/Kazakhstan

ABSTRACT: Numerous geophysical investigations in searching for water have been conducted in Kazakhstan during recent years. In addition to surveys based on special techniques, wide use has been made of the information available from other types of geophysical investigations conducted in the areas of interest. A summary prognostic map of fresh-water development in the northern part of the Turgay depression has been compiled from the resistivity maps made from vertical electrical-sounding measurements. Large areas of the deserts in central and southern Kazakhstan have previously been considered arid. In these areas intrusive and effusive rocks are either exposed or covered by thin loose deposits. Geophysical methods have been used in prospecting for water fracture deposits. The areas favorable for drilling water wells have been selected. Different modifications of resistivity profiling and magnetic and gravity prospecting have been applied. Geophysical investigations for water have proved

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ACC NR: AT6028386

highly effective in Kazakhstan. Boreholes and pits sunk at sites recommended by geophysicists have struck potable water in 287 of 322 localities. The experience of the geophysicists of Kazakhstan can be of great use in prospecting for water in desert and arid regions of Asia and Africa under similar geohydrological conditions. Orig. art. has: 7 figures.

SUB CODE: 08/ SUBM DATE: 06Jan65/

Card 2/2



SOV/109--4-3-9/38

AUTHOR: <sup>N</sup> H.P. Gavelya

TITLE: Distribution of Current in an Infinite Cylindrical Conductor Subjected to a Lumped Excitation (O raspredelenii toka v beskonechnom tsilindricheskom provodnike pri sosredotochenom возбужdenii)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 3, pp 404-416 (USSR)

ABSTRACT: The current distribution function in a thin cylindrical conductor is one of the basic problems in the theory of linear antennae or single-conductor transmission lines. This problem has been considered by a number of authors (Refs 1,2,3,4,5 and 6). A general solution of the problem is attempted in this article. It is assumed that an infinite cylindrical conductor having a radius  $a$  (see Fig 1) is situated in a uniform medium having a permittivity  $\epsilon$ , permeability  $\mu$  and conductivity  $\sigma$ . The material of the conductor has an infinite conductivity. A cylindrical system of co-ordinates  $r, \varphi$ , and  $z_1$  is adopted, so that the axis  $z_1$  coincides with the axis of the conductor. The external electrical forces act in parallel to the axis  $z_1$  and are

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Distribution of Current in an Infinite Cylindrical Conductor  
Subjected to a Lumped Excitation

distributed uniformly along the circumference of the conductor. The electric vector of the external field  $E_{CT}$  is parallel to the axis  $z_1$ ; is independent of  $\varphi$  and is a function of  $z_1$  and time  $t$ ; the time dependence of the vector is sinusoidal. The electromagnetic field excited by the external forces in the surrounding medium contains components  $E_{z1}$ ,  $E_r$  and  $H_\varphi$ . The magnetic component of the field can be expressed by:

$$H_\varphi = - \frac{k_1}{Z_0} \int_{-\infty}^{+\infty} g(\lambda_1) \frac{H_1^{(1)}(r \sqrt{k_1^2 - \lambda_1^2})}{\sqrt{k_1^2 - \lambda_1^2}} e^{i\lambda_1 z_1} d\lambda_1, (1)$$

where  $\lambda_1$  is the propagation constant along the axis  $z_1$ ,  $H_{0.1}^{(1)}$  is a cylindrical function of the third kind (Hankel function); the remaining symbols of Eq (1) are defined on page 405; the function  $g$  is defined by Eq (2). If the distribution of the external forces in Eq (2) is described by means of the  $\delta$  function, as expressed by Eq (3), the function  $g$  is in the form of Eq (4). The magnetic field component is then given by

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Eq (5), and the current flowing along the conductor is given by Eq (6). If the following notation is adopted:

$\lambda = \lambda_1 a$ ;  $z = z_1/a$ ,  $k = k_1 a = 2\pi a/\Lambda$  where  $\Lambda$  is the wavelength in the surrounding medium, the current can be expressed by Eq (7). The integral of Eq (7):

$$F = \int_{-\infty}^{+\infty} \frac{H_1^{(1)}(\sqrt{k^2 - \lambda^2}) e^{i\lambda z}}{\sqrt{k^2 - \lambda^2} H_1^{(1)}(\sqrt{k^2 - \lambda^2})} d\lambda \quad (9)$$

gives the distribution function for the current. It is shown that the distribution function  $F$  can be written in the form of Eq (16) where  $F_1$  and  $F_2$  are expressed by Eqs (17) and (18), while  $P$  is given by Eq (19). The function  $P$  can be expressed in the form of Eq (26); it is then given in terms of the functions which have been tabulated. The function  $F_2$  of the function  $F$  can be written as Eq (29), where  $F_2^0$  is given by Eq (28) while  $F_2'$  is expressed by Eq (30). The first component of  $F_2$

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is given by Eq (33) while the component  $F_2'$  can be expanded into a series; the resulting expression for  $F_2'$  is in the form of Eq (37). The coefficients  $A_n$  and  $B_n$  of the expansion of Eq (37) are given by Eqs (41) and (42) respectively. It is shown that the coefficient  $B_n$  can also be expressed by Eq (44), where  $q$  is given by Eq (45). The final expression for  $B_n$  is given by Eq (56), where  $W$  is defined by Eq (48). The function  $W$  can be represented by Eq (57) where  $W_1$  and  $W_2$  are given by Eqs (58) and (59), respectively. The final expression for  $W$  is in the form of Eq (70). On the basis of the above analysis it is shown that the current distribution function can be written as Eq (71) or, in its final form as:

$$F = \pi H_0^{(1)}(kz) + e^{i\frac{\pi}{4}} F_2^0 + e^{i\frac{\pi}{4}} \sum_{n=0}^{\infty} A_n B_n, \quad (73)$$

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where  $F_2^0$  and  $M$  are expressed by Eq (74), while the

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coefficients  $A_n$  and  $B_n$  are given by Eqs (75) and (77) respectively. The coefficients  $B_0$  and  $B_1$  are given by Eqs (79) and (81), respectively. When  $z \gg 1$  and  $a \ll \lambda$ , the current can be written in the form of Eq (82); the coefficients  $A_1$ ,  $B_1$ ,  $A_2$  and  $B_2$  in this equation can be determined from Eqs (75), (79) and (81). The formulae derived permit the determination of the current distribution function at any distance from the excitation source. The formulae take into account the influence of the radiation field as well as the properties of the medium in the vicinity of the conductor. The author expresses his gratitude to Prof. M.I. Kontorovich and Prof. A.T. Taldykin for a number of valuable remarks.

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There are 3 figures and 15 references, 10 of which are  
Soviet, 3 English and 2 German. Four of the Soviet  
references are translated from English.

SUBMITTED: October 28, 1957

Card 6/6

GAVELYA, S.P. [Havelya, S.P.]

Behavior of solutions of linear elliptic systems of differential  
equations in the vicinity of sets of their singularities. Nauk zap.  
L'viv. un. 44 no.8:152-157 '57. (MIRA 11:6)  
(Differential equations)

GAVELYA, S.P. [Havelya, S.P.]

Reducing the boundary problems for elliptic systems of differential equations associated with nonconvex domains to regular integral equations. Nauk zap. L'viv. un. 44 no.8:158-174 '57. (MIRA 11:6)  
(Differential equations, Partial) (Integral equations)



GAVELYA, S.P., Cand Phys-Math Sci-- (diss)" Extension of a method of <sup>one</sup> ~~the~~ reduction to regular integral equations of ~~boundary value~~ <sup>boundary value</sup> problems for ~~the~~ elliptic systems of differential equations <sup>to cases</sup> ~~in the case~~ of non-convex <sup>fields</sup> ~~regions~~."

L'vov, 1958. 13 pp (Min of Higher Education UkrSSR. L'vov State Univ im Ivan Franko), 100 copies. Bibliography: pp-12-13 (18 titles)

(KL, 24-58,115)

LOPATINSKIY, Yaroslav Borisovich [Lopatyns'kyi, I.A.B.]; GAVELYA, S.P.  
[Havelia, S.P.], otv.red.; BЛИKH, V.V., red.; MALYAVKO, A.V.,  
tekhn.red.

[Fundamentals of linear algebra] Osnovy liniinoi algebry.  
L'viv, Vyd-vo L'viva'koho univ., 1959. 108 p. (MIRA 13:4)  
(Algebra, Linear)

GAVEL, A. S. P.

16(1) PHASE I BOOK EXPLOITATION SOV/2660  
Vsesoyuzny matematicheskiy s'ezd. 3rd. Moscow, 1956  
Trudy. t. 4: Kratkoye soedyneniye sektsionnykh dokladov. Doklady inostrannykh uchennykh [Transactions of the 3rd All-Union Mathematical Conference in Moscow, vol. 4: Summary of Sectional Reports. Reports of Foreign Scientists] Moscow, Izd-vo AN SSSR, 1959. 247 p. 2,200 copies printed.  
Sponsoring Agency: Akademiya nauk SSSR. Matematicheskii institut.  
Tech. Ed.: G.M. Shvachenko; Editorial Board: A.A. Abramov, V.G. Boltyanskii, A.M. Vasil'yev, B.V. Medvedev, A.D. Myshkis, S.M. Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, N.G. Chetaev, G. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.  
COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains a series of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper was printed in a previous volume, reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, algebra, differential equations, functional analysis, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

Vol'kov, D.M. (Leningrad). Certain generalizations of the concept of energy and problems of stability for partial differential equations 16  
Gavrilin, S.P. (L'vov). On the behavior of solutions of linear elliptic systems in the neighborhoods of certain singular manifolds 16  
Gel'man, A.Ya. (Leningrad). On the reducibility of systems of differential equations with quasiperiodic coefficients 17  
Gubari, M.A. (Gor'kiy). Description of noncoarse singular points of a dynamic system on the plane by means of the coarse points of proximate systems 18  
Dzin, A.A. (Moscow). On the solvable extensions of linear differential operators of the first order 18  
Drachin, A.R. (L'vov). On one method of determining the asymptotic properties of the eigenvalues and eigenfunctions of elliptic systems. Card 5/34 19

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S/041/60/012/003/001/011  
C111/C222

AUTHOR: Gavelya, S.P.

TITLE: On Solutions of Linear Elliptic Systems of Differential Equations  
With a Discontinuous Free Term

PERIODICAL: Ukrainakiy matematicheskiy zhurnal, 1960, Vol. 12,  
No. 3, pp. 235 - 243

TEXT: The author considers

$$(6) \quad A(x, \frac{\partial}{\partial x})v(x) = \varphi(x)$$

Here  $A$  is a linear elliptic differential operator of the order  $s$  with smooth coefficients defined in the region  $D$  of the real  $x = (x_1, \dots, x_n)$  ( $A$  is a  $p \times p$  matrix). In the closure  $\bar{\Omega}$  of a subregion of  $D$  let  $A$  have the fundament-

al matrix  $\omega(x, \xi)$ . Let (1): the derivatives  $\frac{\partial^{k_1 + \dots + k_n + 1_1 + \dots + 1_n}}{\partial x_1^{k_1} \dots \partial x_n^{k_n} \partial \xi_1^{1_1} \dots \partial \xi_n^{1_n}} \omega(x, \xi)$

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On Solutions of Linear Elliptic Systems of Differential Equations With a Discontinuous Free Term

exist for all  $0 \leq k_1 + \dots + k_n \leq s$ ,  $0 \leq l_1 + \dots + l_n \leq t-n$ ,  $x, \xi \in \Omega$ ,  $x \neq \xi$ ,  
and belong to the classes  $K_{n-s+k_1+\dots+k_n+1, 1, \dots, 1_n}$  (cf. (Ref.1) :  $\varphi(x, \xi)$ )  
belongs to the class  $K_m$  if for  $x, \xi \in \Omega$ ,  $x \neq \xi$ ,  $\varphi(x, \xi)$  is continuous  
and  $|x - \xi|^m \varphi(x, \xi)$  for  $m > 0$  or  $\varphi(x, \xi)/\ln|x - \xi|$  for  $m = 0$  or  $\varphi(x, \xi)$   
is bounded for  $m < 0$ . Furthermore let

$$(2) \quad A(x, \frac{\partial}{\partial x}) \frac{\partial^{l_1+\dots+l_n}}{\partial \xi_1^{l_1} \dots \partial \xi_n^{l_n}} \omega(x, \xi) = 0$$

for  $x, \xi \in \Omega$ ,  $x \neq \xi$  and  $0 \leq l_1 + \dots + l_n \leq t-n$ . Furthermore: for  
every  $f(x)$  (column with the height  $p$ ) satisfying the Hölder condition in the  
closure  $\bar{\Omega}^*$  of an  $\Omega^* \subset \Omega$  let identically be

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On Solutions of Linear Elliptic Systems of Differential Equations With a Discontinuous Free Term

$$(3) \quad A(x, \frac{\partial}{\partial x}) \int \overset{n}{\dots} \int \omega(x, \xi) f(\xi) d\xi \Omega = f(x)$$

for all  $x \in \Omega^*$ . Let the coordinate origin 0 belong to  $\Omega$ ; let (4)  $\varphi(x)$  be a column of  $p$  functions  $\varphi_1(x), \dots, \varphi_p(x)$  satisfying the Hölder condition in every  $x \in \Omega \setminus 0$  and for which there exists an  $\alpha$  so that

$|\varphi(x)| |x|^{t-\alpha}$  is uniformly bounded in  $\Omega \setminus 0$ . Let  $t$  be integral,  $t \leq n+1$ ,  $\alpha < 1$ ,  $s < n$ .

Let now

$$\begin{aligned} \omega^0(x, \xi) &= \omega(x; \vartheta, \varrho) \Big|_{\varrho=0} + \frac{\partial \omega(x; \vartheta, \varrho)}{\partial \varrho} \Big|_{\varrho=0} \varrho + \dots \\ &\dots + \frac{\partial^{t-n-1} \omega(x; \vartheta, \varrho)}{\partial \varrho^{t-n-1}} \Big|_{\varrho=0} \frac{\varrho^{t-n-1}}{(t-n-1)!}, \end{aligned}$$

where  $\omega(x; \vartheta, \varrho)$  denotes the transition to the spherical coordinates of the point  $\xi$ :  $\xi_i = \varrho \cos \vartheta_1 \dots \cos \vartheta_{i-1} \sin \vartheta_i$  ( $i = 1, \dots, n-1$ ). Let  $\omega^*(x, \xi) =$   
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$= \omega(x, \xi) - \omega^0(x, \xi)$ . It is shown: Under the assumptions (1)-(4)

$$(5) \quad v(x) = \int_{\Omega} \underbrace{\omega^*(x, \xi)}_n \varphi(\xi) d\xi$$

is a solution of (6) in  $\Omega \setminus 0$  which for  $k_1 + \dots + k_n = k < s$  and  $0 < \beta < \alpha$  admits the estimation

$$(12) \quad \frac{\partial^{k_1 + \dots + k_n}}{\partial x_1^{k_1} \dots \partial x_n^{k_n}} v(x) \in K_{t-s+k-\beta}^0$$

(12) is valid also for  $k = s$  under certain additional assumptions. Let

$B(x, \frac{\partial}{\partial x})$  be a  $(\frac{p}{2} \times p)$  - matrix of linear differential operators the coefficients of which are continuous functions of the point  $x$  on the boundary  $S$  of  $\Omega$ . The author considers the problem :  
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S/041/60/012/003/001/011  
C111/C222

On Solutions of Linear Elliptic Systems of Differential Equations With a Discontinuous Free Term

$$(21) \quad A(x, \frac{\partial}{\partial x})u(x) = \varphi(x) \quad \text{for } x \in \Omega \setminus 0$$

$$(22) \quad \lim_{x \rightarrow y} B(y, \frac{\partial}{\partial x})u(x) = \psi(y) \quad \text{for } y \in S$$

Let  $\mathcal{L}(x)$  be a given  $s$ -fold smooth function in  $\Omega \setminus 0$ . It is stated that the estimation

$$(23) \quad \frac{\partial^{k_1 + \dots + k_n}}{\partial x_1^{k_1} \dots \partial x_n^{k_n}} [u(x) - \mathcal{L}(x)] \in K^0_{n-s+k-0} \quad (0 \leq k \leq s)$$

is sufficient for the uniqueness of the solution of (21)-(22). For the solvability of this problem  $\mathcal{L}$  has to satisfy the condition:

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Discontinuous Free Term

$$(24) \quad \left\{ A(x, \frac{\partial}{\partial x}) \mathcal{L}(x) - \varphi(x) \right\} \in K_{n-0}^0$$

There are 2 Soviet references.

SUBMITTED: July 24, 1959

Card 6/6

24,4200.

S/044/62/000/008/030/073  
C111/C222

AUTHORS: Cavelya, S.P., Kuzemko, A.M.

TITLE: On the elastic equilibrium of a rigidly fixed flat shell of constant curvature with an arbitrary boundary

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1962, 66, abstract 8B298. ("Tr. Konferentsii po teorii plastin i obolochek, 1960". Kazan', 1961, 77-82)

TEXT: The solution of the problem formulated in the title is reduced to the successive solution of regular systems of integral equations. Here known results of the potential theory, especially results of Ya.B. Lopatinskiy, are used. According to the opinion of the authors the solvability of the obtained systems of integral equations is physically evident.

[Abstracter's note: Complete translation.]

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S/044/62/000/007/040/100  
C111/C222

7114200

AUTHORS: Gavelya, S.P., Kuzemko, A.M.

TITLE: The application of regular integral equations to some problems of the theory of flat shells

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 67, abstract 7B324. ("Zb. robit aspirantiv Mekhan.-matem. ta fiz. fak. L'vivs'k. un-t", 1961, no. 1, 3-10)

TEXT: The authors consider the system of differential equations for the equilibrium of flat elastic shells. The authors use known results for the Lamé system and for the biharmonic equation and construct the Green function for the principal parts of the differential operators of the system. With the aid of this Green function the problem is reduced to a regular system of Fredholm integral equations of second kind. It is pointed out that this system is unrestrictedly solvable, if the shell is sufficiently weakly curved. As an example the authors consider a problem with rigid-flexible fixing.

[Abstracter's note : Complete translation.]

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S/041/62/014/002/003/008  
B112/B108

AUTHOR: Gavelya, S. P.

TITLE: Solutions of linear elliptic systems of differential equations with multi-dimensional sets of singularities

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, v. 14, no. 2, 1962, 191-197

TEXT: The author considers inhomogeneous systems  $A(x, \partial/\partial x)u(x) = \phi(x, \xi)$ , where  $\xi$  denotes the set of singularities of the function  $\phi$ . This set is assumed to be 1-dimensional ( $1 < n$ ). The solutions are represented in the form

$$w(x) = \int \frac{n}{\Omega} \int \omega^*(x, \xi) \phi(\xi, \xi) d\xi \Omega.$$

The classes that contain the generalized functions

$\partial^{k_1 + \dots + k_n} w(x) / \partial x_1^{k_1} \dots \partial x_n^{k_n}$  are determined. The special case  $\phi(x, \xi) = A(x, \partial/\partial x)v(x, z)$  is investigated, where  $v(x, z)$  occurs in the solution

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Solutions of linear elliptic ...

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B112/B108

$$\Psi(x, \sigma) = \int \sum_{\Sigma}^m v(x, z) d_z \Sigma$$
  
of the homogeneous system  $A(x, \partial/\partial x)u(x) = 0$ .

SUBMITTED: May 20, 1960, L'vov

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Gavelya, S. P.  
BOROVSKIY, P. V.

PHASE I BOOK EXPLOITATION

SOV/6206 25

Konferentsiya po teorii plastin i obolochek. Kazan', 1960.

Trudy Konferentsii po teorii plastin i obolochek, 24-29 oktyabrya 1960. (Transactions of the Conference on the Theory of Plates and Shells Held in Kazan', 24 to 29 October 1960). Kazan', [Izd-vo Kazanskogo gosudarstvennogo universiteta, 1961. 426 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Kazanskiy filial. Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina.

Editorial Board: Kh. M. Mushtari, Editor; F. S. Isanbayeva, Secretary; N. A. Alamyae, V. V. Bolotin, A. S. Vol'mir, N. S. Ganiyev, A. L. Gol'denveyzer, N. A. Kil'chevskiy, M. S. Kornishin, A. I. Lur'ye, G. N. Savin, A. V. Sachenkov, I. V. Svirskiy, R. G. Surkin, and A. P. Filippov. Ed.: V. I. Aleksagin; Tech. Ed.: Yu. P. Semenov.

PURPOSE: The collection of articles is intended for scientists and engineers who are interested in the analysis of strength and stability of shells.

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Transactions of the Conference (Cont.)

SOV/6206

75

COVERAGE: The book is a collection of articles delivered at the Conference on Plates and Shells held in Kazan' from 24 to 29 October 1960. The articles deal with the mathematical theory of plates and shells and its application to the solution, in both linear and nonlinear formulations, of problems of bending, static and dynamic stability, and vibration of regular and sandwich plates and shells of various shapes under various loadings in the elastic and plastic regions. Analysis is made of the behavior of plates and shells in fluids, and the effect of creep of the material is considered. A number of papers discuss problems associated with the development of effective mathematical methods for solving problems in the theory of shells. Some of the reports propose algorithms for the solution of problems with the aid of electronic computers. A total of one hundred reports and notes were presented and discussed during the conference. The reports are arranged alphabetically (Russian) by the author's name.

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Vinokurov, S. G. Large Deflections of a Conical Panel in a Temperature Field	66
Gavrilov, Yu. V. Investigation of the Spectrum of Natural Vibrations of Elastic Circular Cylindrical Shells	72
Gavelya, S. P., and A. M. Kuzemko. On the Elastic Equilibrium of a Rigidly Clamped Shallow Shell of Constant Curvature With Arbitrary Contour	77
Galimov, K. Z. On the Theory of Finite Deformations of Thin Shells	83
Galkin, S. I. Torsion of a Circular Stiffened Cylindrical Shell With a Reinforced Rectangular Opening, Making Allowance for the Elasticity of the Frames	92
Gansyeva, M. S. Large Deflections of a Rectangular Plate Under Uniform Normal Pressure and Nonuniform Heating	101

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GAVELYA, S.P.; KOSARCHIN, V.N.

Elastic equilibrium of a shallow spherical shell rigidly clamped  
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GAVELYA, S. P.; SHATALOV, V. I. (Zaporozhye)

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The principal part of the booklet presents a general description of the flora and fauna of the Moscow Seas and its shores. There are a number of pictures in this section showing hunters and fishermen in the area, various species of wild life, and several wooded and marsh-like sections of shore-line. Three pages are devoted to a non-technical discussion of the chemical composition of the water of the sea. The final eight pages of the booklet discuss the significance of the Moscow Sea for the Kalinin Oblast, but this discussion is confined almost exclusively to climate changes and the increase in fishing possibilities, with only passing mention of shipping and land transportation facilities.

LXIX

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USSR/Geography - Kalinin Oblast      May/Jun 53

"Review of M. M. Bocharov's 'Nature of Kalinin Oblast'" (B. A. Shirokov, reviewer)

Iz V-s Geog Ob, Vol 85, No 3, pp 308, 309

Favorably reviews Bocharov's book "Priroda Kalininskoy Oblasti," edited by Prof A. V. Gufman, Kalininizdat, 1951, 127 pp, 500 copies, 6 rubles.

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*GAVEMAN, A. V.*

USSR/Engineering--Reservoir building

Card 1/1

Pub. 86--20/39

Authors : Gaveman, A. V., Prof.

Title : Moscow Sea

Periodical : Priroda 44/1, 98--101, Jan 1955

Abstract : A description is given of an artificial lake covering 329 km<sup>2</sup> formed by damming the Volga River in the southwestern part of the Kalinin district. The effect on the flora and fauna is described, especially on the habits of birds, the chemical analysis of the water is stated together with other features such as change in climate, depth of water (maximum 19 m), etc. Illustrations.

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Submitted : .....



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(MIRA 11:2)

(Kamchatka--Forest and forestry)

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